

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF MAILING

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Signed:

Susan W. Xu

In re application of: BENGTSOON ET AL.

Attorney Docket No.: AXISP702D1

Application No.: N/A

Divisional of Application Serial No.: 09/162,681

Examiner: N/A

Filed: Herewith

Group: 2152

Title: INTEGRATED CIRCUIT AND METHOD  
FOR BRINGING AN INTEGRATED CIRCUIT TO  
EXECUTE INSTRUCTIONS

**PRELIMINARY AMENDMENT OF A DIVISIONAL APPLICATION FILED  
PURSUANT TO 37 CFR § 1.53 (b)**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please preliminarily amend the above identified application as follows.

**IN THE SPECIFICATION:**

Please replace the paragraph beginning at Page 1 in the section entitled "Priority Claimed" with the following rewritten paragraph:

--This is a divisional application of copending prior application 09/162,681 filed on September 29, 1998 and entitled "*Integrated Circuit and Method for Bringing an Integrated Circuit to Execute Instructions*" which application claims the benefit of priority to Swedish Application No. 9801671-0, filed May 13, 1998, entitled "*Integrated Circuit and Method for Bringing an Integrated Circuit to Execute Instructions*" the disclosures of which are incorporated herein by reference for all purposes. --

**IN THE CLAIMS:**

Please cancel Claims 1-10, and 12-27, amend claim 11 and add Claims 28-44 as follows:

11. (Amended) An integrated circuit for coupling a peripheral device with a network, and the integrated circuit comprising:

a memory; and

a processor configured to couple to the network and the peripheral device, and the processor operable during an initialization mode to generate a unique identifier uniquely identifying the integrated circuit, to communicate across the network utilizing a non-unique network address together with the unique identifier to obtain both an operating system for the peripheral device and a unique network address, and to download the operating system to the peripheral device via the memory thereby enabling a run-time mode for the peripheral device.

28. (New) The integrated circuit of Claim 11, wherein the unique identifier is a random number generated by the processor .

29. (New) The integrated circuit of Claim 11, further comprising:

a cache controller coupled to the memory;

the processor further operable during the initialization mode to disable the cache controller and to download the operating system for the peripheral device to the memory and from the memory to the peripheral device, and the processor operable during the run-time mode to enable the cache controller thereby enabling the memory as a cache memory for run-time processes executed by the processor.

30. (New) The integrated circuit of Claim 29, wherein the run-time processes executed by the processor include processes associated with the operating system for the peripheral device.

31. (New) The integrated circuit of Claim 11, further comprising:

a local bus with address and data lines coupled to both the processor and the memory; and

address and data buffers for coupling the local bus to the peripheral device thereby to enable the processor to execute processes associated with the operating system of the peripheral device.

32. (New) An integrated circuit for coupling a peripheral device with a network, and the integrated circuit comprising:

a memory;

a cache controller coupled to the memory; and

a processor operable during an initialization mode to disable the cache controller and to download an operating system for the peripheral device from the network to the memory and from the memory to the peripheral device, and the processor operable during a run-time mode to enable the cache controller thereby enabling the memory as a cache memory for run-time processes executed by the processor.

33. (New) The integrated circuit of Claim 32, with the processor further operable during the initialization mode to generate a unique identifier uniquely identifying the integrated circuit, to communicate across the network utilizing a non-unique network address together with the unique identifier to obtain both the operating system for the peripheral device and a unique network address for the run-time mode, and to download the operating system to the peripheral device via the memory thereby enabling the run-time mode for the peripheral device.

34. (Amended) The integrated circuit of Claim 33, wherein the unique identifier is a random number generated by the processor .

35. (New) The integrated circuit of Claim 32, wherein the run-time processes executed by the processor include processes associated with the operating system for the peripheral device.

36. (New) The integrated circuit of Claim 32, further comprising:

a local bus with address and data lines coupled to the processor, the memory and the cache controller; and

address and data buffers for coupling the local bus to the peripheral device thereby to enable the processor to execute processes associated with the operating system of the peripheral device.

37. (New) A method for enabling an integrated circuit coupling a peripheral device to a network to execute instructions, comprising the acts performed on the integrated circuit of:

generating in an initialization mode a unique identifier uniquely identifying the integrated circuit;

communicating in the initialization mode across the network utilizing a non-unique network address together with the unique identifier to obtain both an operating system for the peripheral device and a unique network address;

downloading in the initialization mode the operating system to the peripheral device; and

enabling a run-time mode for the network operation of the peripheral device.

38. (New) The method of Claim 37, wherein the unique identifier generated in the generating act comprises a random number.

39. (New) The method of Claim 37, wherein:

the downloading act further comprises the acts of:

temporarily storing the operating system in a memory within the integrated circuit;

transferring the operating system in the memory to the peripheral device; and wherein

the enabling act further comprises the acts of:

enabling the memory to perform as a cache memory during run-time mode for processes executed by the processor.

40. (New) The method of Claim 39, wherein the processes executed by the processor during run-time mode include processes associated with the operating system for the peripheral device.

41. (New) A method for enabling an integrated circuit coupling a peripheral device to a network to execute instructions, comprising the acts performed on the integrated circuit of:

communicating in the initialization mode across the network to obtain an operating system for the peripheral device;

temporarily storing the operating system in a memory within the integrated circuit;

transferring the operating system in the memory to the peripheral device;

enabling a run-time mode for the network operation of the peripheral device; and

caching, in the memory, data utilized by the integrated circuit during run-time network operation of the peripheral device.

42. (New) The method of Claim 41, wherein the communicating act further comprises the act of:

generating in an initialization mode a unique identifier uniquely identifying the integrated circuit; and

communicating in the initialization mode across the network utilizing a non-unique network address together with the unique identifier to obtain both an operating system for the peripheral device and a unique network address for the run-time mode of operation of the peripheral device.

43. (New) The method of Claim 42, wherein the unique identifier comprises a random number.

44. (New) The method of Claim 41, further comprising:

executing on the integrated circuit in the run-time mode the processes associated with the operating system for the peripheral device.

## REMARKS

The present application is a divisional application of an originally filed parent application Serial # 09/162,681 entitled "INTEGRATED CIRCUIT AND METHOD FOR BRINGING AN INTEGRATED CIRCUIT TO EXECUTE INSTRUCTIONS" and filed on September 29, 1998. The parent application was assigned to Examiner P. H. KANG, of Group# 2152.

In the parent application the Examiner, in an Office Action dated December 18, 2000, imposed a restriction or election requirement directed to Group I, Claims 1-10; and Group II, Claims 11-27. Responsive to the restriction requirement Group I, Claims 1-10, were elected by the Applicant which Claims have been allowed in amended form and will be issued in the parent application.

In this, the divisional application, Applicant has resumed prosecution of the subject matter of Group II. Applicant has amended Claim 11, cancelled Claims 1-10 and 12-27 and added new claims 28-44 for prosecution. These Claims are believed to be in a condition for the Examiner's examination and consideration for allowance. Such early action is solicited.

## Markup

Attached hereto is a marked-up version of the changes made to the specification and the claims by the current amendment. The attached page is captioned **“Version with markings to show changes made.”**

## **CONCLUSION**

Claims 11, and 28-44 as presented are believed to be in a condition for the Examiner's examination and consideration for allowance. Such early action is solicited.


The Commissioner is authorized to charge any additional fees which may be required, to Deposit Account No. 50-1338 (Docket No. AXISP702D1).

Respectfully submitted,  
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*Versions With Markings to Show Changes Made***IN THE SPECIFICATION:**

The paragraph beginning at Page 1 in the section entitled "Priority Claimed" has been amended as follows:

This is a divisional application of copending prior application 09/162,681 filed on September 29, 1998 and entitled "Integrated Circuit and Method for Bringing an Integrated Circuit to Execute Instructions" which application ~~This application~~ claims the benefit of priority to Swedish Application No. 9801671-0, filed May 13, 1998, entitled **Integrated Circuit and Method for Bringing an Integrated Circuit to Execute Instructions.** "Integrated Circuit and Method for Bringing an Integrated Circuit to Execute Instructions" the disclosures of which are incorporated herein by reference for all purposes.

**IN THE CLAIMS:**

Applicant has cancelled Claims 1-10, and 12-27, amended claim 11 and added Claims 28-44 as follows:

11. (Amended) An integrated circuit for coupling a peripheral device with a network, and the integrated circuit comprising:

[a processing unit;]

[a port for external communication;]

a memory [means]; and

[a switching means for switching the circuit between a working mode and an initiating mode, wherein the circuit in the initiating mode, is adapted to bring the processing unit to execute external instructions received from an external initiating signal.]

a processor configured to couple to the network and the peripheral device, and the processor operable during an initialization mode to generate a unique identifier uniquely identifying the integrated circuit, to communicate across the network utilizing a non-unique network address together with the unique identifier to obtain both an operating system for the peripheral device and a unique network address, and to download the operating system to the peripheral device via the memory thereby enabling a run-time mode for the peripheral device.



28. (New) The integrated circuit of Claim 11, wherein the unique identifier is a random number generated by the processor.

29. (New) The integrated circuit of Claim 11, further comprising:

a cache controller coupled to the memory;

the processor further operable during the initialization mode to disable the cache controller and to download the operating system for the peripheral device to the memory and from the memory to the peripheral device, and the processor operable during the run-time mode to enable the cache controller thereby enabling the memory as a cache memory for run-time processes executed by the processor.

30. (New) The integrated circuit of Claim 29, wherein the run-time processes executed by the processor include processes associated with the operating system for the peripheral device.

31. (New) The integrated circuit of Claim 11, further comprising:

a local bus with address and data lines coupled to both the processor and the memory;  
and

address and data buffers for coupling the local bus to the peripheral device thereby to enable the processor to execute processes associated with the operating system of the peripheral device.

32. (New) An integrated circuit for coupling a peripheral device with a network, and the integrated circuit comprising:

a memory;

a cache controller coupled to the memory; and

a processor operable during an initialization mode to disable the cache controller and to download an operating system for the peripheral device from the network to the memory and from the memory to the peripheral device, and the processor operable during a run-time mode

to enable the cache controller thereby enabling the memory as a cache memory for run-time processes executed by the processor.

33. (New) The integrated circuit of Claim 32, with the processor further operable during the initialization mode to generate a unique identifier uniquely identifying the integrated circuit, to communicate across the network utilizing a non-unique network address together with the unique identifier to obtain both the operating system for the peripheral device and a unique network address for the run-time mode, and to download the operating system to the peripheral device via the memory thereby enabling the run-time mode for the peripheral device.

34. (Amended) The integrated circuit of Claim 33, wherein the unique identifier is a random number generated by the processor.

35. (New) The integrated circuit of Claim 32, wherein the run-time processes executed by the processor include processes associated with the operating system for the peripheral device.

36. (New) The integrated circuit of Claim 32, further comprising:

a local bus with address and data lines coupled to the processor, the memory and the cache controller; and

address and data buffers for coupling the local bus to the peripheral device thereby to enable the processor to execute processes associated with the operating system of the peripheral device.

37. (New) A method for enabling an integrated circuit coupling a peripheral device to a network to execute instructions, comprising the acts performed on the integrated circuit of:

generating in an initialization mode a unique identifier uniquely identifying the integrated circuit;

communicating in the initialization mode across the network utilizing a non-unique network address together with the unique identifier to obtain both an operating system for the peripheral device and a unique network address;

downloading in the initialization mode the operating system to the peripheral device; and

enabling a run-time mode for the network operation of the peripheral device.

38. (New) The method of Claim 37, wherein the unique identifier generated in the generating act comprises a random number.

39. (New) The method of Claim 37, wherein:

the downloading act further comprises the acts of:

temporarily storing the operating system in a memory within the integrated circuit;

transferring the operating system in the memory to the peripheral device; and wherein

the enabling act further comprises the acts of:

enabling the memory to perform as a cache memory during run-time mode for processes executed by the processor.

40. (New) The method of Claim 39, wherein the processes executed by the processor during run-time mode include processes associated with the operating system for the peripheral device.

41. (New) A method for enabling an integrated circuit coupling a peripheral device to a network to execute instructions, comprising the acts performed on the integrated circuit of:

communicating in the initialization mode across the network to obtain an operating system for the peripheral device;

temporarily storing the operating system in a memory within the integrated circuit;

transferring the operating system in the memory to the peripheral device;

enabling a run-time mode for the network operation of the peripheral device; and

cached, in the memory, data utilized by the integrated circuit during run-time network operation of the peripheral device.

42. (New) The method of Claim 41, wherein the communicating act further comprises the act of:

generating in an initialization mode a unique identifier uniquely identifying the integrated circuit; and

communicating in the initialization mode across the network utilizing a non-unique network address together with the unique identifier to obtain both an operating system for the peripheral device and a unique network address for the run-time mode of operation of the peripheral device.

43. (New) The method of Claim 42, wherein the unique identifier comprises a random number.

44. (New) The method of Claim 41, further comprising:

executing on the integrated circuit in the run-time mode the processes associated with the operating system for the peripheral device.